REMARKS

Claims 1-38 are pending in the above-captioned patent application after this amendment. Claims 1-38 have been rejected. The applicant respectfully traverses the rejection of claims 1-7, 12 and 13. Claims 8-11, 14-21, 23-25, 30 and 32-38 have been amended for the purpose of expediting the patent application process in a manner consistent with the goals of the Patent Office pursuant to 65 Fed. Reg. 54603 (September 8, 2000), even though the Applicants believe that the previously pending claims were allowable.

Support for the amendments to the claims can be found throughout the originally filed application, including the originally filed claims, the drawings and the specification. More specifically, support for the amendments to claims 8-11, 14-21, 23-25, 30 and 32-38 can be found at least in Figures 1A-5, in claims 1-7 and 12, and in the specification at page 10, lines 20-31, and at page 11, line 11 through page 16, line 12.

No new matter is believed to have been added by this amendment. Consideration of the pending application is respectfully requested.

Rejections Under 35 U.S.C. § 102

Claims 1-2, 5-6, 13 and 30-33 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0200473 to Fung. The Applicants respectfully traverse the rejection of claims 1-2, 5-6 and 13 by the Patent Office on the grounds that the cited reference does not teach or suggest the features of the rejected claims, as set forth below.

The Patent Office states in its rejection that "Fung shows the claimed controller as RAID controller 108, for example, in Fig. 25, discussed at paragraph 276. He clearly teaches that his system allows at least two disk drives to be in different modes during the transfer of data as claimed." The Applicants respectfully submit that the analysis of Fung by the Patent Office is not accurate.

Fung is directed toward a system that reduces power consumption during read operations. (Paragraph 280). Specifically, Fung provides that "in the RAID 1 (and RAID 10) configurations, only one drive (primary or mirror) or one set of drives (primary set or

mirror set) need to be available or powered ON at a time to support such read operations." (Paragraph 280; emphasis added). Moreover, Fung clearly states that "since the RAID 1 configuration requires only one drive (or one set of drives) to be active for any given read operation, the other drive (alternate drive) can essentially be shut off completely or put into power saving mode." (Paragraph 286; emphasis added).

In contrast, Fung does not disclose reducing power consumption during a write operation. In fact, Fung specifically states that "during a write cycle, which occurs very infrequently relative to read cycles, the CPU, operating system or other control means or process will restore power to the inactive drive first before it starts writing to the active one." (Paragraph 283; emphasis added). Further, Fung emphasizes that "restoring the power to the inactive drive first will allow the inactive drive enough time to come up to speed so there will be no dead time or delay between writing of the two drives." (Paragraph 283). Fung highlights the difference between read and write operations as follows: "For a RAID 10 configuration, the data would be written in stripped fashion to the primary and mirrored drives or drive sets in normal manner, but read operations would only require participation of the currently active RAID 10 drive or drive sets." (Paragraph 287; emphasis added). Thus, Fung teaches that during the transfer of data to the drives, i.e. during write operations, the primary and mirror drives are both powered up.

In contrast to Fung, claim 1 of the present application is directed toward a "storage system that stores data from a host system, the storage system comprising: a housing; a plurality of disk drives positioned within the housing; and a controller that controls the disk drives, wherein at least two of the disk drives are in different modes during the transfer of data to at least one of the disk drives." These features are not taught or suggested by Fung. Therefore, a rejection of claim 1 under 35 U.S.C. § 102(e) is unsupported by Fung. Further, because claims 2, 5-6 and 13 depend directly or indirectly from claim 1, a rejection of these claims under 35 U.S.C. § 102(e) is also unsupported by Fung.

Amended claim 30 is believed to be allowable in view of Fung. Amended claim 30 is directed toward a "method for storing data from a host system, the method

comprising the steps of: providing a plurality of disk drives positioned within a housing; and controlling the disk drives so that at least two of the disk drives are in different modes during the transfer of data to at least one of the disk drives." These steps are not taught or suggested by Fung. Therefore, amended claim 30 is believed to be allowable. Because claims 31-38 depend from claim 30, they are likewise believed to be allowable.

Accordingly, the rejection of claims 1-2, 5-6, 13 and 30-33 should be withdrawn, and these claims should be allowed.

Rejections Under 35 U.S.C. § 103

Claims 3-4, 7-12, 14-29 and 34-38 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0200473 to Fung. The Applicants respectfully traverse the rejection under 35 U.S.C. § 103(a) of claims 3-4, 7-12 and 34-38 on the grounds that Fung does not teach or suggest the features of these claims. As previously provided, Fung does not teach or suggest reducing power consumption during a write operation.

As provided above, the rejection of claim 1 is believed to be inappropriate. Because claims 3-4 and 7-12 depend directly or indirectly from claim 1, a rejection of these claims is likewise believed to be inappropriate. Further, claim 30 is considered to be allowable. Because claims 34-38 depend from claim 30, there are also believed to be allowable.

Additionally, amended claim 14 is believed to be allowable in view of Fung. Amended claim 14 is directed toward a storage system that requires "a first rail assembly including a plurality of disk drives arranged in at least two rows; and a controller that controls the disk drives, wherein the disk drives in one of the rows are in a stand-by mode and the disk drives in one of the rows are in a write mode at approximately the same time." These features are not taught or suggested by Fung. Therefore, amended claim 14 is believed to be allowable. Because claims 15-22 depend from claim 14, they are likewise believed to be allowable.

Moreover, amended claim 23 is considered to be allowable in view of Fung.

Amended claim 23 is directed toward a storage system that requires "a housing; a first rail assembly positioned within the housing, the first rail assembly including a plurality of disk drives arranged in three rows; a second rail assembly positioned within the housing, the second rail assembly including a plurality of disk drives arranged in three rows; and a controller that controls the disk drives, wherein the disk drives in four of the rows are in a stand-by mode and the disk drives in two of the rows are in a write mode at approximately the same time." These features are not taught or suggested by Fung. Therefore, amended claim 23 is believed to be allowable. Because claims 24-29 depend from claim 23, they are likewise believed to be allowable.

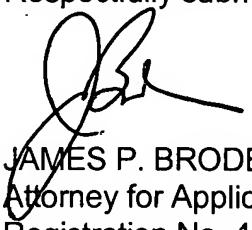
Accordingly, the Applicants respectfully submit that the rejection of claims 3-4, 7-12, 14-29 and 34-38 should be withdrawn and these claims should be allowed.

Conclusion

In conclusion, Applicants respectfully assert that claims 1-38 are allowable for the reasons set forth above, and that the application is now in a condition for allowance. Accordingly, an early notice of allowance is respectfully requested. The Examiner is requested to call the undersigned at 858-672-0454 for any reason that would advance the instant application to issue.

Dated this the 21st day of April, 2004.

Respectfully submitted,



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